
FILE 'USPAT' ENTERED AT 08:52:25 ON 29 APR 1999

* WELCOME TO THE *
* U.S. PATENT TEXT FILE *

=> s bmp(p)(bone or protein)

677 BMP
34554 BONE
70917 PROTEIN
L1 361 BMP(P)(BONE OR PROTEIN)

=> s bone(w)(morphogenetic or morphogenic)(w)protein

34554 BONE
481 MORPHOGENETIC
413 MORPHOGENIC
70917 PROTEIN
L2 407 BONE(W)(MORPHOGENETIC OR
MORPHOGENIC)(W)PROTEIN

=> s plasmid or plasmids or vector or vectors or recombinant or recombinants

15090 PLASMID
11330 PLASMIDS
68287 VECTOR
37880 VECTORS
20292 RECOMBINANT
2730 RECOMBINANTS
L3 82728 PLASMID OR PLASMIDS OR VECTOR OR VECTORS OR
RECOMBINANT OR
REC
OMBINANTS

=> s l1 or l2

L4 503 L1 OR L2

=> s l4(10a)l3

WARNING - PROXIMITY OPERATOR PRECEDENCE LEVEL
CONFLICTS OR IS NOT CONSIS
TENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L4(10A)L3'
L5 289 L4(10A)L3

=> s therapy or therapies or therapeutic or treat or treats or treated or treatment
or treatments or implant or implants or implantation or implanted

43205 THERAPY
5859 THERAPIES
61471 THERAPEUTIC
73573 TREAT
7941 TREATS
383604 TREATED
400754 TREATMENT
70723 TREATMENTS
21425 IMPLANT
13006 IMPLANTS
35766 IMPLANTATION
37521 IMPLANTED
L6 600838 THERAPY OR THERAPIES OR THERAPEUTIC OR TREAT
OR TREATS OR T
REA
TED OR TREATMENT OR TREATMENTS OR IMPLANT OR
IMPLANTS OR IM
PLA
NTATION OR IMPLANTED

=> s l5(10a)l6

WARNING - PROXIMITY OPERATOR PRECEDENCE LEVEL
CONFLICTS OR IS NOT CONSIS
TENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L5(10A)L6'
L7 285 L5(10A)L6

=> d his

(FILE 'USPAT' ENTERED AT 08:52:25 ON 29 APR 1999)

L1 361 S BMP(P)(BONE OR PROTEIN)
L2 407 S BONE(W)(MORPHOGENETIC OR
MORPHOGENIC)(W)PROTEIN
L3 82728 S PLASMID OR PLASMIDS OR VECTOR OR VECTORS
OR RECOMBINANT
OR
L4 503 S L1 OR L2
L5 289 S L4(10A)L3
L6 600838 S THERAPY OR THERAPIES OR THERAPEUTIC OR
TREAT OR TREATS O
R T
L7 285 S L5(10A)L6

=> s l4(p)l6

L8 222 L4(P)L6

=> s l4(10a)l3

WARNING - PROXIMITY OPERATOR PRECEDENCE LEVEL
CONFLICTS OR IS NOT CONSIS
TENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L4(10A)L3'
L9 289 L4(10A)L3

=> s l9(p)l8

WARNING - PROXIMITY OPERATOR PRECEDENCE LEVEL
CONFLICTS OR IS NOT CONSIS
TENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L9(P)L8'
L10 119 L9(P)L8

=> d l10,cit,rel,ab,1-119

1. 5,891,147, Apr. 6, 1999, Minimally invasive spinal surgical methods &
instruments; Peter A. Moskovitz, et al., 606/79 [IMAGE AVAILABLE]

US PAT NO: 5,891,147 [IMAGE AVAILABLE] L10: 1 of 119
REL-US-DATA: Division of Ser. No. 670,351, Jun. 25, 1996, Pat. No.
5,741,261.

ABSTRACT:

Minimally invasive spinal surgical techniques and tools are provided. The methods include separating the iliocostalis lumborum muscle from the anterior leaf of the thoracolumbar fascia to create a channel from the patient's skin to the intertransverse interval. In one embodiment, the method also includes delivering graft material through the channel to the intertransverse interval. A device according to one aspect of the present invention includes a retraction portion having a flattened plate configured to atraumatically retract tissue to create a working space within an endosurgical site and a curved shaft attached to the retraction portion. The shaft includes a bend having a radius of preferably 160 degrees. A gripping portion is attached to the shaft and is configured for manually gripping and manipulating the device.

2. 5,885,829, Mar. 23, 1999, Engineering oral tissues; David J. Mooney, et al., 435/325; 424/49, 422, 435; 435/69.1, 374, 378 [IMAGE AVAILABLE]

US PAT NO: 5,885,829 [IMAGE AVAILABLE] L10: 2 of 119

ABSTRACT:

Disclosed are methods for regenerating dental and oral tissues from viable cells using ex vivo culture on a structural matrix. The regenerated oral tissues and tissue-matrix preparations thus provided have both clinical applications in dentistry and oral medicine and are also useful in in vitro toxicity and biocompatibility testing.

3. 5,885,292, Mar. 23, 1999, Minimally invasive spinal surgical methods and instruments; Peter A. Moskovitz, et al., 606/79, 61, 86 [IMAGE AVAILABLE]

US PAT NO: 5,885,292 [IMAGE AVAILABLE] L10: 3 of 119
REL-US-DATA: Division of Ser. No. 670,351, Jun. 25, 1996, Pat. No.

09/148239
AD #7

Set Items Description

? s bmp(10n)(bone or protein)

4164 BMP
842062 BONE
3253189 PROTEIN
S1 2529 BMP(10N)(BONE OR PROTEIN)
? s bone(w)(morphogenetic or morphogenic)(w)protein

842062 BONE
17821 MORPHOGENETIC
2564 MORPHOGENIC
3253189 PROTEIN
S2 5309 BONE(W)(MORPHOGENETIC OR
MORPHOGENIC)(W)PROTEIN
? s s1 or s2

2529 S1
5309 S2
S3 5644 S1 OR S2
? s plasmid? or vector? or recombinant

266601 PLASMID?
263879 VECTOR?
406978 RECOMBINANT
S4 772913 PLASMID? OR VECTOR? OR RECOMBINANT
←User Break→
!

? s plasmid or plasmids or vector or vectors or recombinant recombinants

218723 PLASMID
113072 PLASMIDS
200309 VECTOR
98158 VECTORS
0 RECOMBINANT RECOMBINANTS
S5 452035 PLASMID OR PLASMIDS OR VECTOR OR VECTORS
OR RECOMBINANT
RECOMBINANTS
? s plasmid or plasmids or vector or vectors or recombinant or recombinants

218723 PLASMID
113072 PLASMIDS
200309 VECTOR
98158 VECTORS
406978 RECOMBINANT
15276 RECOMBINANTS
S6 770193 PLASMID OR PLASMIDS OR VECTOR OR VECTORS
OR RECOMBINANT
OR RECOMBINANTS
? s s3(10n)s4

5644 S3
772913 S4
S7 771 S3(10N)S4
? s therapy or therapies or therapeutic or treat or treats or treated or treatment or
treatments or implant or implanted or implants or implanting

Processing
Processing
3778152 THERAPY
47161 THERAPIES
1386639 THERAPEUTIC
83250 TREAT
2657 TREATS
1405730 TREATED
3590433 TREATMENT
246451 TREATMENTS
72702 IMPLANT
118116 IMPLANTED
85116 IMPLANTS
5355 IMPLANTING
S8 7285544 THERAPY OR THERAPIES OR THERAPEUTIC OR
TREAT OR TREATS OR
TREATED OR TREATMENT OR TREATMENTS OR
IMPLANT OR
IMPLANTED OR IMPLANTS OR IMPLANTING

? s s7(25n)s8

771 S7
7285544 S8
S9 202 S7(25N)S8
? rd

...examined 50 records (50)
...examined 50 records (100)
...examined 50 records (150)
...examined 50 records (200)
...completed examining records
S10 124 RD (unique items)
? s s10 and py<=1997

Processing
Processing
Processing
124 S10
42216848 PY<=1997
S11 93 S10 AND PY<=1997
? t s11/3,ab/1-93

11/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)
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11895001 BIOSIS NO.: 199900141110
Effective doses of recombinant human bone morphogenetic protein-2 in
experimental spinal fusion.

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JOURNAL: Spine 21 (18):p2115-2122 Sept. 15, 1996
ISSN: 0362-2436
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Study Design. Nineteen dogs underwent L4-L5 intertransverse
process fusions with either 58 mug, 115 mug, 230 mug, 460 mug, or 920 mug
of recombinant human bone morphogenetic protein-2 carried by a polylactic
acid polymer. A previous study (12 dogs) compared 2300 mug of recombinant
human bone morphogenetic protein-2, autogenous iliac bone, and carrier
alone in this model. All fusions subsequently were compared. Objectives.
To characterize the dose-response relationship of recombinant human bone
morphogenetic protein-2 in a spinal fusion model. Summary of Background
Data. Recombinant osteoinductive morphogens, such as recombinant human
bone morphogenetic protein-2, are effective in vertebrate diaphyseal
defect and spinal fusion models. It is hypothesized that the quality of
spinal fusion produced with %%%recombinant%%% human
%%bone%%%

%%morphogenetic%% %%%protein%%-2, above a threshold dose,
does not
change with increasing amounts of inductive protein. Methods. After
decontamination of the posterior elements, the designated %%%implants%%
were placed along the intertransverse process space bilaterally. The
fusion sites were evaluated after 3 months by computed tomography
imaging, high-resolution radiography, manual testing, mechanical testing,
and histologic analysis. Results. As in the study using 2300 mug of
recombinant human bone morphogenetic protein-2, implantation of 58-920
mug of recombinant human bone morphogenetic protein-2 successfully
resulted in intertransverse process fusion in the dog by 3 months. This
had not occurred in animals containing autograft or carrier alone. The
cross-sectional area of the fusion mass and mechanical stiffness of the
L4-L5 intersegment were not dose-dependent. Histologic findings varied
but were not related to rhBMP-2 dose. Inflammatory reaction to the
composite implant was proportional inversely to the volume of the fusion
mass. Conclusions. No mechanical, radiographic, or histologic differences
in the quality of intertransverse process fusion resulted from a 40-fold
variation in dose of recombinant human bone morphogenetic protein-2.

11/3,AB/2 (Item 2 from file: 5)